Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NATIONAL RESEARCH COUNCIL

REPORT OF THE SECOND MEETING OF THE COUNCIL

The second meeting of the Research Council was held on November 13 and 14, 1916, in Cambridge, in connection with the Autumn Meeting of the National Academy of Sciences.

No formal actions were taken.

Dr. W. H. Welch, President of the Academy, reviewed the organization and earlier work of the Council; and Dr. G. E. Hale, chairman of the Council, reported on the recent activities of its committees, and discussed broadly the general purposes of the movement and the plans for the immediate future. He described in some detail the studies which he has recently made in England and France of the organizations of scientific men in those countries for the purpose of assisting their governments.

Addresses were made by members of the Council as follows:

Dr. S. W. Stratton, Director of the National Bureau of Standards, Washington. Target practice in the Navy and some of the research problems involved; illustrated with moving pictures.

Lieut. Col. George O. Squier, Chief of Aviation, U. S. Army. Scientific research for national defense, as illustrated by the problems of aviation.

Dr. Arthur A. Noyes, Massachusetts Institute of Technology. The nitrogen problem in war and in agriculture.

Various phases of the work of the Council were then discussed by several of its members.

Cary T. Hutchinson, *Secretary.*

REPORT OF MEETINGS OF THE EXECUTIVE COMMITTEE

The third meeting of the Executive Committee of the Research Council was held in New York City on October 16, 1916. Messrs. Carty, Conklin, Dunn, Hale, Pearl, Pupin, Stratton, and the Secretary were present.

The following resolutions adopted by the American Philosophical Society on October 6, 1916, were presented to the Committee:

Whereas as effort is being made to bring into co-operation existing governmental, educational, industrial, and other research organizations with the object of encouraging the investigation of natural phenomena, the application of scientific principles in American industries, the employment of science in the national defense, and such other objects as will promote the national welfare; and

Whereas, these objects are among those for which the American Philosophical Society exists.

Now, therefore, be it resolved that the American Philosophical Society hereby registers its approval of the co-ordination and federation of the research agencies of the country and expresses its willingness to join with and assist the National Research Council, organized by the National Academy of Sciences to accomplish the above federation.

A letter was presented from the National Canners' Association asking the co-operation of the Research Council in the conduct of investigations on toxic elements in canned foods: Raymond Pearl, V. C. Vaughan, and C. L. Alsberg were appointed a committee to confer with representatives of the Association in regard to the matter.

The matter of the ice patrol of the North Atlantic was presented by Dr. S. W. Stratton, and it was voted that a committee be appointed by the Council to co-operate with the government Committee on Ocean Surveys and Ice Patrol.

The question of agricultural research in this country was presented by Dr. Raymond Pearl and discussed by the committee. It was voted that Dr. Pearl and Dr. Hale be authorized to confer with the Secretary of Agriculture to ascertain from him how best the Research Council can co-operate with his Department and who would best represent his Department in the work of the Research Council.

Regarding the procedure of the committees, it was voted that the committees of the Council appointed for carrying out the various branches of the work first decide upon a general plan of procedure and submit this plan to the Executive Committee for its approval. The committees shall then proceed to carry on in detail the general plan as approved by the Executive Committee; but they shall not take any action connected with legislation or with questions of public policy without first consulting the Executive Committee. They shall make reports of progress to the Council at its annual meeting and to the Executive Committee at such times as it may direct.

The fourth meeting of the Executive Committee was held on October 21, 1916, in New York City. Messrs. Carty, Dunn, Hale, Noyes, and the Secretary were present.

A committee on the Utilization of Industrial Research Facilities for the National Defense was formed, and J. J. Carty was appointed chairman.

The rest of the meeting was devoted to a consideration of a report drafted by Dr. G. E. Hale to be presented to the President of the Academy on the work of the Research Council and to be transmitted by him to the President of the United States.

The fifth meeting of the Executive Committee was held on November 4, 1916, in New York City. Messrs. Carty, Dunn, Hale, Noyes, and the Secretary were present. Dr. Hale reported that under the authorization previously given by the Executive Committee he had proceeded with the organization of the Military Section of the Research Council. As members of that Section there have been appointed by the President of the United States three members from the Army, namely, Brigadier-General William Crozier, Chief of Ordnance; Brigadier General W. C. Gorgas, Surgeon General; and Lieut. Col. G. O. Squier, Chief of Aviation, and three representatives of the Navy, namely, Rear-Admiral D. W. Taylor, Chief Constructor; Rear-Admiral R. S. Griffin, Engineer-in-Chief; and Dr. J. D. Gatewood, Medical Director.

It was voted to appoint a committee consisting of V. C. Vaughan (chairman), C. B. Davenport, H. H. Donaldson, W. H. Holmes, and Raymond Pearl to consider the organization of research in anthropological and sociological sciences, and to report to the Executive Committee in regard to this matter.

A report was presented from the Chemistry Committee in regard to appointment of sub-committees. It was voted that such committees be appointed by the Research Council on nomination of the Chemistry Committee.

The sixth meeting of the Executive Committee was held on November 15, 1916, in Boston. Messrs. Conklin, Hale, Noyes, Pearl, Stratton, Vaughan, and Welch were present.

A report was presented from the Committee on Chemistry (M. T. Bogert, chairman) recommending the organization of a number of sub-committees. It was voted to defer action on these committees until the relation of certain of them to other branches of science could be properly considered.

The Committee then took up the consideration of the formation of general committees representing various branches of science. It was voted to organize the following general science committees (in addition to that on Chemistry previously established): Mathematics. Astronomy. Physics. Geology and Paleontology. Geography. Botany. Zoology and Animal Morphology. Physiology. Medicine. Hygiene. Agriculture. Psychology. Anthropology.

CARY T. HUTCHINSON, *Secretary.*

NATIONAL RESEARCH COUNCIL

SCIENTIFIC RESEARCH FOR NATIONAL DEFENSE AS ILLUSTRATED BY THE PROBLEMS OF AERONAUTICS

Abstract from an Address of Lieut. Colonel George O. Squier, U. S. A.

The following are some present problems connected with the development of Military Aviation and Aerostation.

1. *Aerodynamics.*—(*a*) Continue the development of the mathematical theory to explain the aerodynamic phenomena recorded in the aerodynamical laboratories, and to forecast further results.

(*b*) Obtain solutions for the speed and direction of flow of air about geometric and aerotechnic forms and develop experimental means to visualize or map the speed and direction of flow.

(*c*) Map the currents of the upper atmosphere which may be of most use in aerial navigation, and evolve simple practical rules for the guidance of pilots.

(*d*) Give fuller explanation of the phenomena of soaring, i.e., airplaning indefinitely without motive power.